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The Tourism-Environment Nexus; Challenges and Opportunities

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Abstract: Tourism industry is heavily dependent on environment. Moreover the vitality of sustainable tourism development in an environmentally friendly manner along with avoidance of ecological damages has been highly emphasized by environmentalists, which indicate the significance of this phenomenon and its vulnerability as well. This study by means of descriptive qualitative approach employs content analysis as its method and sets ecological modernization theory as well as sustainability as its theoretical framework and reviews tourism literature and highlights bilateral impacts of the tourism and the environment on each other. The realization of these themes not only beckons the tourism stakeholders to be more cautious about the upcoming effects of their activities, but also increases social awareness about these impacts along with the importance of the environment.

Keywords: Environment, negative impacts, positive influences, tourism.

1. Introduction

“It is widely recognized that the physical environment plays a significant role in shaping and being shaped by tourism”(Parris, 1997 cited in Kousis, 2000, p. 468). Besides its positive effects, tourism industry brings undeniable negative influences on the local destinations’ environment as well (Andereck et al., 2005). According to Rowe et al (2002) the terminology of environment refers to the physical setting where tourism takes place (e.g. mountain ranges, coastal resorts, picturesque villages, historical sites, museums, national parks). Unsustainable plans and uncontrolled constructions falsified urbanization damage the wildlife and natural environment and also bring about water and air pollution (Tatoglu et al., 1998). That is the improper construction of roads and other infrastructures not only lead to degradation of the natural environment and wildlife but also the deformation of the scenery (Farooquee et al., 2008). Moreover the unbalanced use of the archaeological and heritage sites that are so fragile leads to their devastation (Gee et al., 1997 cited in Tatoglu et al, 1998).

One of the most significant negative effects of tourism on the environment is the pollution of the soil, air and also water. The dearth of a suitable sewage system and lack of waste management when combine with pressures resulted from visitors presence, make the seas or the rivers a source for disposal of garbage and waste (Maurer, 1992 cited in Bauer, 2008) which consequently bring about the pollution of the seafood and drinkable water of the local indigenous people as well as the likely skin diseases or other sorts of illnesses both for the tourists and hosts who swim or consume such waters (Bauer, 2008).

In other study Zhong et al (2011) indicate that the growth of tourism industry increases the environmental damages like declining of the air quality, increasing of the noise, disturbance of the quietness and peace, increasing of the water pollution and also biodiversity disorders. Destruction of the natural environment for the purpose of hotels and airports constructing and also networking channels in natural coverage zones,

polluting the natural environment and outbreak of epidemic diseases are a number of negative environmental impacts of tourism (Egbali et al., 2011).

On the other hand, tourism can raise public support for conservation of the ecosystem since it provides environmental education to visitors and local community indigenous (ILO, 2011). Tourism income such as the general spending of the tourists can be invested in the destination's environmentally suitable infrastructures for instance providing proper sewage systems, changing improper cooking fuels into environmentally friendly ones as well as providing enough financial incentives for the indigenous to protect the natural beauty of the environment instead of damaging it by logging, mining or hunting the natural treasures (Bauer, 2008). However tourism industry can be less environmentally damaging in comparison to other revenue generating industries that are based on natural resource use, like slash and burn agriculture, forestry, pastoral farming and wood collecting (ILO, 2011).

2. Theoretical framework

The issue of sustainability, as being the main indicator for gaining long term success in tourism industry, is of great importance not only in city planning, but also in tourism planning. The appearance of sustainability and its development took place after 1980's in the literature for the first time. Different definitions and attitudes are attributed to sustainability as in Brutland Commissions report, a proper definition of sustainability is given which is close to city planning. The definition is concerned with the ways of managing the nature, building socio cultural resources of host communities in order to bring well economic being for locals, preserving natural resources, preserving socio cultural capital, satisfying the needs of visitors and locals as the main aims of sustainability.

The issue of sustainability with its growing need and also its traces on environment and tourism industry has been among the concerns of academicians and their fields of study.

Character and identity as main components of sustainability can also have significant impact on local communities and national governments. It should be mentioned that the nature of tourism makes sustainability an attractive component for tourism development. The development steps begin from sustainability and ends with implementation in the context of tourism development, as sustainability widely exists in everywhere, in land use, environment management, community perceptions and etc.

There are some factors which support community response to change as; Well-planned tourism goals and strategy based on sustainable development, also as the concept of sustainability argues, well designed or prepared plans and the involvement of locals to tourism development planning process is the contend of success in the industry. The concept underlines the role of governments in the participation of host communities in tourism planning especially in policy making and in implementation stage. Well prepared strategies can be guarantee for occurred changes; also the changes can easily be managed by planners. Additionally, the sustainable tourism plan creates the main body of structure for long term success in sectors as parts of development depend on government and communities in which governments through implementing some law on involvement and participation of locals in tourism planning may efficiently expand the development system. It should be noted that nowadays the sustainability is a must factor that its absence can result in serious negative impacts and problems to the environment and in long term to the existence of tourism industry itself (Rezapouraghdam et al., 2015).

3. Design and methods

This study utilized a content analysis methodology by reviewing the related literature in tourism and hospitality industry. The authors have tried to collect the combination of two major poles of bilateral impacts of tourism and environment together. These two poles are the positive and negative influences of the phenomenon on each other. After collecting the most significant themes in these two categories, the authors briefly through **Table.1** illustrated the reciprocating influences of tourism and environment.

4. Review of the Literature

Wall and Mathieson (2006) declare it is inevitable to experience environmental conversions together with tourism growth. Tourism industry may use or abuse the ecology of target destinations in one way or another (Nickerson, 1996). That means tourism and environment have a tight correlation with each other and any activities of tourists and facilities provided in favour of them effect the environment either positively or negatively (Gladstone et al., 2013). A large number of studies considering the relation between tourism and environment stated the constructions and general infrastructures as the main source of environmental use of tourism in destinations.

5. Negative Impacts of Tourism

Based on what scholars declare tourism development can impose both negative and positive impacts on the environment (Rezapouraghdam and Ghasemi Olya, 2014). Although tourism has some benefits, still environmental costs are associated with it. According to United Nations Environment Programme (UNEP), when environmental resources are not able to cope with the level of visitors' usage of these resources then negative impacts from tourism on environment arise (<http://www.unep.org/resourceefficiency>). Green and Hunter (1995) stated that in destinations where tourism has rapidly grown, there are unbearable pressures on the

environmental resources and therefore those places will experience indispensable environmental harms sooner or later. For instance island of Cancu'n (Mexico) as a result of mass tourism and construction of several buildings, resorts and parks considerable damages imposed on the island where before development, was the home to a variety of marine life and was an important nesting site for seabirds and sea turtles (Wiese, 1996, cited in Davenport, 2006).

Several research findings demonstrate that one of the main environmental consequences of tourism overdevelopment is pollution, such as air pollution from vehicles and airplanes, and also water pollution resulting from discharges of sewage, fertilizer leakage and road oil (Andereck, 1995, cited in Mieczkowski, 1995; Green & Hunter, 1995). Noise pollution is another form of pollution found in researches done by Green and Hunter (1995), resulting from cars and tourists activities. Littering, destruction of vegetation, soil, forests, coastlines and wildlife are also among environmental impacts of tourism figured out by researchers (Andereck, 1995, cited in Mieczkowski, 1995; Green & Hunter, 1995). On the negative side of the environmental impacts of tourism, traffic has been the issue of concern resulting from tourism activities which is vivid in several studies (Brunt and Courtney 1999; Johnson et al 1994; McCool and Martin 1994, cited in Andereck, 2005).

A research by Andereck (1995) shows that 91% of respondents agreed that tourism affected the quality and upkeep of attractions and 93% believed that tourism affected the quality of national provincial parks. While others believe that tourism causes environmental pollution, the destruction of natural resources, the degradation of vegetation and the depletion of wild life (Krohn & Ahmed , 1992; Andereck, 1995; Koenen, Chon, & Christianson, 1995).

According to Gossling (2002), tourism can contribute to environmental changes in these ways, change of land cover and land use, biotic exchange and extinction of wild species, exchange and dispersion of diseases, changes in the perception and understanding of

the environment through travel. Due to the construction of touristic facilities, buildings and infrastructures, depletion and degradation of natural habitats and wild life has emerged recently (Farooquee et al, 2008).

Erosion of soil and sand is another form of negative impact of tourism overdevelopment in tourism industry due to the construction of tourism and recreation facilities. Baud-Bovy and Lawson (1977) found overdevelopment of resorts incurs problems such as, traffic congestion, high-rise and high-density buildings, noise and pollution. Therefore, the activities attributable to the tourists or tourism industry may cause any of the aforementioned environmental impacts, which might lead to short run or long run consequences along with positive or negative, direct or indirect, local or national impacts as well. In the following section, we try to outline and review literature related to each of the environmental impacts.

5.1. Flora and Fauna

Overdevelopment of tourism has imposed a large-scale destruction of ecosystem through vegetation and forests removal in European Alps in order to set tourism facilities (Tyler, 1989). Some other examples of deforestation results in popular tourism destinations are like Mediterranean Basin (Grenon and Batisse, 1989), also same phenomena in Cyprus (Andronikou, 1987) and Majorca in Spain (Morgan, 1991). Overdevelopment of tourism in France the Cote d'Azur (French Riviera) has contributed to the degradation of environment, such as deforestation of hills and mountains of southern France (Mieczkowski, 1995). Deforestation in order to provide fuel-wood for tourists has increased in Khumbu national park in Nepal Everest region (Pawson et al., 1984). Loss of agricultural and forest land in Thailand due to the building of golf courses to cater tourists is reported by Tananone (1991).



Figure.1. Damage to Flora and Fauna

Source: <http://i.huffpost.com>

5.2. Coastal Regions

In many countries coastline resources have been the places receiving pressure by tourism and tourists activities. Detrimental effects upon fragile coastal resources include the elimination of some plant and animal habitats, the obliteration of geological features by excavation, water pollution, disfigurement of the coastline and a reduction in the attractiveness of the resources (Mathieson and Wall, 2006). The beaches are affected by the construction of tourism and recreational facilities in coastal areas in different ways. Sand mining for hotel and roads construction weakens the beaches and accelerates their erosion by waves (Mieczkowski, 1995). Tourists by leaving trashes and wastes at the beaches in another way disturb the beach. As reported by Hussey (1989) foreign tourists discard the plastic bags and the like at the beach in Kuta, Bali.

Tourism overdevelopment on the European seashores, especially on the Mediterranean, has wiped out coastal ecosystems on an unprecedented scale and some of which are beach erosion, sand mining, water pollution, lack of environmental concern, and littering (Mieczkowski, 1995). Tourism pressures on coastal regions of the

Mediterranean are affecting Malta the most, Spain, France, Italy, Yugoslavia, Turkey and Egypt (Grenon & Batise, 1989). Coastal tourism growth in 1970s by 80% in Mediterranean Coasts caused Spanish Rivas suffer most from environmental degradation by tourism overdevelopment (Vadrot, 1977: 83). Another example of coastline deterioration is provided by Rodriguez (1978), as he states: "Large scale tourism has invaded the Mediterranean coasts and is converting this sea into a dead sea where people will soon be unable to bathe unless they want to catch some disease."



Figure.2. Widespread plastic waste in coasts

Sources: <http://coastalcare.org>

5.3. Water

Water constitutes an important natural resource, a focal attraction and a medium for recreational and tourism activities. Tourism activities can impact water in two aspects; quantitative, the supply of fresh water, and qualitative, the problem of water pollution (Mieczkowski, 1995). Tourists consume water 600 liters daily per person in luxury

hotels in the Mediterranean (Grenon and Batise, 1989: 156). Tourists' water consumption in Barbados is six to ten times more than the local community (Gayray, 1981). In Mediterranean regions, the amount of fresh water tourists consume is almost double what the inhabitants of an average Spanish city consume (UNEP, 1999).

Water and sea pollution caused by dumping sewage of hotels and resorts into sea is another concern facing living environment and human health. At the Spanish Costa Del Sol doctors report skin, eye and vaginal infections by bathers caused by the release of hotel and campground sewage (Time, 21 August, 1978). Terry Davies and Sarah Cahill (2000) have identified that tourism-related activities might lead to significant impacts on water quality and the aesthetics of host communities, based on the tourists' activities and location.



Figure.3. Water pollution

Source: www.greenliving.lovetoknow.com

5.4. Pollution

Tourism industry and tourism activities are major contributors to environmental pollution (Andereck et al., 2005; Brunt & Courtney, 1999) in many parts of the world

and many examples prove the significant role of tourism in pollution loads (Johnson et al., 1994). Sewage pollution in Cyprus (Andronikou, 1987), the Norfolk Broads of England (Owens and Owens, 1991), the lakes of the Shinshu mountain region of Honshu Island in Japan (Watanabe, 1990 cited in Hunter and Green, 1995) are among the examples of sewage pollution caused by tourism development.

Another form of pollution that can accompany tourism development is air pollution. Hemele (1988) identifies aircraft, tourists' private cars and heating systems as major contributors to air pollution in tourism development.



Figure.4. Polluted mountains

Source: www.greenliving.lovetoknow.com

5.5. Built Environment

Tourism development can bring out environmental damages as well as negative impacts to cultural, heritage and other attractions. Through bringing investment and environmental upgrading, tourism can revitalize urban areas, besides it can lead to

some damages through heavy pedestrian and vehicular traffic causing higher repair costs (Hunter and Green, 1995).

Improper and misuse of fragile historical places by tourist will lead to devastation of them (Lickorish et al, 1997; Tatoglu, 1998). Godfrey (2000) names some of the environmental consequences of tourism development on built environment and heritages as; traffic congestion and parking problems as, breakdowns in freshwater supply, electricity and sewage system, damages to structures and building because of the traffic vibration, vandalism.

Inappropriately designed touristic facilities, buildings and structures, poor landscaping, besides using unsuitable signs and advertising can result in visual pollution and as a consequent unattractive environment for both tourists and local people (Lickorish et al, 1997).

6. Positive Impacts of Tourism

Tourism development, through increasing the awareness on environmental issues and values and contributing to protect these resources (Akis et al., 1996; Andereck & Nyaupane, 2011) can be beneficial; meanwhile it can be helpful to cover expenses of protection and maintenance of environmental resources (<http://www.unep.org>).

Tourism growth and development, if planned and controlled well, can lead to desirable positive effects. Tourism as a means can provide the funds to conserve and protect historical places and heritages. It has the potential to change and renovate many redundant places to new attraction, shops, hotels or touristic facilities in the favour of the tourists. Tourism development can lead to renovation of transport system and infrastructures, which is interesting for both tourists and residents (Godfrey et al, 2000). Proper tourism development plan can result in improvement of local infrastructures of airports, roads, sewage and water system and telecommunications through providing economic as well as environmental benefits (lickorish et al, 1997).



Figure.5. Conservation tourism projects. Source: machameculturaltourism.com

Table.1. Reciprocating influences of tourism and environment

Negative	1) Destruction of the natural environment
	2) Air, land and water pollution
Positive	1) Increase of the awareness on environmental issues
	2) Renovation of the surroundings' appearance

Source: Authors

7. Conclusion

Since tourism is extremely dependent on the environment and the environment on the other side gets affected by the tourism, understanding their most common impacts on each other seems so crucial. Like any other industry, tourism also is susceptible to variety of risks which may threaten its viability in destinations if not managed well

(Alipour, Arasli, Rezapouraghdam, 2016). This paper tried to highlight these common impacts which have been discussed in different researches throughout the world in recent decades. According the results tourism if not well planned degrade the environmental elements of the destinations but at the same time this industry by increasing the social awareness about the importance of the ecology helps the preservation of the environment as well. Although acquiring sustainable tourism which not only considers the benefits of the all stakeholders but maintain the health of the destination ecology is not that much simple, it should be one of the main criteria of tourism development. The identified themes in this paper exhibit a broad and global perspective about the tourism and environment which emphasize that development of the tourism in any destination more or less will bring about similar consequences thus at the first stage the developers should take effective actions through planning to prevent these negative impacts and increase the positive ones as much as possible.

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